

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A sound retrieving method comprising:
a storing step for storing one or more audio signals as retrieving keys;
a first analyzing step for reading an audio signal among said one or more audio
signals and analyzing the audio signal to output a first sound parameter that is
dependent on structural factors of the sound source of the audio signal;
a second analyzing step for analyzing an audio signal to be analyzed to output a
second sound characteristic parameter that is dependent on structural factors of the
sound source of the audio signal;
a comparing step for comparing the first sound characteristic parameter with the
second sound characteristic parameter to calculate a similarity therebetween; and
a presenting step for presenting a determined result of the similarity based on the
calculated similarity.

~~for retrieving a part of an audio signal to be analyzed resembling one or more~~
~~than one audio signals operating as so many retrieving keys by comparing each of the~~
~~retrieving key sound characteristic parameters obtained from respective audio signals~~
~~operating as retrieving keys and dependent on structural factors of the sound source of~~
~~the audio signals with the sound characteristic parameter obtained by analyzing said~~

~~audio signal to be analyzed and computationally determining the similarity between them.~~

2. (Canceled)

3. (Currently Amended) The sound retrieving method according to claim [[2]]1, wherein said audio signals operating as retrieving keys are extracted from the audio signal to be analyzed and stored.

4. (Original) The sound retrieving method according to claim 1, wherein said retrieving key sound characteristic parameters are obtained by the user by analyzing the part of the audio signal to be analyzed as specified by the user and said audio signal to be analyzed is analyzed by using the retrieving key sound characteristic parameters.

5. (Currently Amended) A sound retrieving method comprising:
a storing step for storing one or more sound characteristic parameters as
retrieving keys, each of the sound characteristic parameters being dependent on
structural factors of a sound source of an audio signal;
a reading step for reading a first sound characteristic parameter among said one
or more sound characteristic parameters;

an analyzing step for analyzing an audio signal to be analyzed to output a second sound characteristic parameter that is dependent on structural factors of the sound source of the audio signal;

a comparing step for comparing the first sound characteristic parameter with the second sound characteristic parameter to calculate a similarity therebetween; and

a presenting step for presenting a determined result of the similarity based on the calculated similarity.

~~The sound retrieving method according to claim 1, wherein said one or more than one retrieving key sound characteristic parameters are stored in advance and those that are read out from the stored retrieving key sound characteristic parameters during the retrieving process are used for said process of computationally determining the similarity.~~

6. (Original) The sound retrieving method according to claim 5, wherein said retrieving key sound characteristic parameters are those obtained by analyzing said audio signal operating as retrieving keys that are extracted from said audio signal to be analyzed.

7. (Previously Presented) The sound retrieving method according to claim 1, wherein more than one retrieving keys are sequentially used on one by one basis by a predetermined time unit for the process of computationally determining the similarity.

8. (Previously Presented) The sound retrieving method according to claim 1, wherein the result of each retrieving process using a retrieving key is displayed for the audio signal to be analyzed on a temporal basis.

9. (Currently Amended) The sound retrieving method according to claim ~~[[7]]~~5, wherein the result of each retrieving process using a retrieving key is displayed for the audio signal to be analyzed on a temporal basis.

10. (Previously Presented) The sound retrieving method according to claim 1, wherein only the part or parts of the audio signal to be analyzed resembling the retrieving keys are extracted and reproduced as a result of the retrieving process.

11. (Currently Amended) The sound retrieving method according to claim ~~[[7]]~~5, wherein only the part or parts of the audio signal to be analyzed resembling the retrieving keys are extracted and reproduced as a result of the retrieving process.

12. (Currently Amended) A sound information storing method comprising:
a storing step for storing one or more audio signals as retrieving keys;
a first analyzing step for reading an audio signal among said one or more audio
signals and analyzing the audio signal to output a first sound parameter that is
dependent on structural factors of the sound source of the audio signal;

a second analyzing step for analyzing an audio signal to be analyzed to output a second sound characteristic parameter that is dependent on structural factors of the sound source of the audio signal;

a comparing step for comparing the first sound characteristic parameter with the second sound characteristic parameter to calculate a similarity therebetween; and

a recording step for recording a determined result of the similarity based on the calculated similarity.

~~for recording an input audio signal on a recording medium and retrieving a part of an audio signal to be analyzed resembling one or more than one audio signals operating as so many retrieving keys by comparing each of the retrieving key sound characteristic parameters obtained from the respective audio signals operating as retrieving keys and dependent on structural factors of the sound source of the audio signals with the sound characteristic parameter obtained by analyzing said audio signal to be analyzed and computationally determining the similarity between them so as to record the result of the retrieving process as linked to said retrieving keys and the position used for recording said input audio signal on said recording medium.~~

13. (Original) The sound information storing method according to claim 12, wherein said result of the retrieving process is recorded with said audio signal on said recording medium.

14. (Previously Presented) The sound information storing method according to claim 12, wherein each of said retrieving key sound characteristic parameters obtained

from respective audio signals operating as retrieving keys is obtained as a result of an analyzing process conducted on a part of said input audio signal selected and extracted according to an instruction of the user.

15. (Original) The sound information storing method according to claim 14, wherein said retrieving key sound characteristic parameters of said one or more than one audio signals operating as retrieving keys obtained as a result of the analyzing process conducted on a part of said audio signal selected and extracted according to an instruction of the user are stored in different respective memory areas of a buffer memory and subsequently read out and used for the process of retrieving a part of the input audio signal by computationally determining the similarity.

16. (Original) The sound information storing method according to claim 14, wherein said one or more than one parts of said input audio signal selected and extracted according to respective instructions of the user are stored in different respective memory areas of a buffer memory as audio signals operating as retrieving keys and said one or more than one audio signals operating as retrieving keys are read out from said buffer memory and analyzed to produce respective retrieving key sound characteristic parameters so that said process of retrieving a part of the input audio signal by computationally determining the similarity is conducted by using said audio signals operating as retrieving keys.

17. (Previously Presented) The sound information storing method according to claim 12, wherein said sound characteristic parameters of said audio signals operating as retrieving keys or said audio signals operating as retrieving keys are recorded with said result of the retrieving process on said recording medium.

18. (Original) The sound information storing method according to claim 14, wherein said sound characteristic parameters of said audio signals operating as retrieving keys or said audio signals operating as retrieving keys are recorded with said result of the retrieving process on said recording medium.

19. (Currently Amended) A sound information retrieving device comprising;
a storing means for storing one or more audio signals as retrieving keys;
a first analyzing means for reading an audio signal among said one or more
audio signals and analyzing the audio signal to output a first sound parameter that is
dependent on structural factors of the sound source of the audio signal;
a second analyzing means for analyzing an audio signal to be analyzed to output
a second sound characteristic parameter that is dependent on structural factors of the
sound source of the audio signal;
a comparing means for comparing the first sound characteristic parameter with
the second sound characteristic parameter to calculate a similarity therebetween; and
a presenting means for presenting a determined result of the similarity based on
the calculated similarity.

~~a sound characteristic parameter analyzing means for analyzing an audio signal to be analyzed and obtaining a sound characteristic parameter dependent on structural factors of the sound source of the audio signal, a retrieving means for comparing sound characteristic parameters for audio signals operating as retrieving keys and said sound characteristic parameter for the audio signal to be analyzed obtained from said sound characteristic parameter analyzing means and retrieving a part of the audio signal to be analyzed resembling the audio signals operating as retrieving keys and obtained from the sound source of the retrieving keys and a result displaying means for displaying the result of said retrieving process.~~

20. (Original) The sound information retrieving device according to claim 19, wherein said result displaying means displays the said resembling part as determined by said retrieving means simultaneously with the temporal progress of said audio signal to be analyzed.

21. (Canceled)

22. (Original) The sound information retrieving device according to claim 19, further comprising a holding means for holding said one or more than one retrieving key sound characteristic parameters and a reading means for reading selected retrieving key sound characteristic parameters from said holding means and supplying them to said similarity determining means.

23. (Original) The sound information retrieving device according to claim 22, further comprising a retrieving key registering means for extracting sound characteristic parameters as retrieving keys from said audio signal to be analyzed by analyzing said audio signal according to an instruction of the user and holding them in said holding means.

24. (Original) The sound information retrieving device according to claim 19, wherein more than one retrieving keys are sequentially used on a one by one basis by a predetermined time unit for the process of computationally determining the similarity.

25. (Currently Amended) A sound information retrieving device comprising:
a storing means for storing one or more sound characteristic parameters as retrieving keys, each of the sound characteristic parameters being dependent on structural factors of a sound source of an audio signal;

a reading means for reading a first sound characteristic parameter among said one or more sound characteristic parameters;

an analyzing means for analyzing an audio signal to be analyzed to output a second sound characteristic parameter that is dependent on structural factors of the sound source of the audio signal;

a comparing means for comparing the first sound characteristic parameter with the second sound characteristic parameter to calculate a similarity therebetween; and

a reproducing means for reproducing a determined result of the similarity based on the calculated similarity.

~~a sound characteristic parameter analyzing means for analyzing an audio signal to be analyzed and obtaining a sound characteristic parameter dependent on structural factors of the sound source of the audio signal, a retrieving means for comparing sound characteristic parameters for audio signals operating as retrieving keys and said sound characteristic parameter for the audio signal to be analyzed obtained from said sound characteristic parameter analyzing means and retrieving a part of the audio signal to be analyzed resembling the audio signals operating as retrieving keys and obtained from the sound source of the retrieving keys and a reproducing means for extracting and reproducing only said resembling part according to the result of the retrieving process of said retrieving means.~~

26. (Canceled)

27. (Currently Amended) The sound information retrieving device according to claim ~~[[26]]~~25, further comprising a retrieving key registering means for extracting said audio signals operating as retrieving keys from said audio signal to be analyzed according to an instruction of the user and holding them in said holding section.

28. (Original) The sound information retrieving device according to claim 25, further comprising a holding means for holding said one or more than one retrieving key sound characteristic parameters and a reading means for reading selected retrieving key sound characteristic parameters from said holding means and supplying them to said similarity determining means.

29. (Original) The sound information retrieving device according to claim 28, further comprising a retrieving key registering means extracting sound characteristic parameters as retrieving keys from said audio signal to be analyzed by analyzing said audio signal according to an instruction of the user and holding them in said holding means.

30. (Original) The sound information retrieving device according to claim 25, wherein more than one retrieving keys are sequentially used on a one by one basis by a predetermined time unit for the process of computationally determining the similarity.

31. (Currently Amended) A sound information storage device comprising:
a retrieving means for retrieving one or more sound characteristic parameters as retrieving keys, each of the sound characteristic parameters being dependent on structural factors of a sound source of an audio signal;
a reading means for reading a first sound characteristic parameter among said one or more sound characteristic parameters;
an analyzing means for analyzing an audio signal to be analyzed to output a second sound characteristic parameter that is dependent on structural factors of the sound source of the audio signal;
a comparing means for comparing the first sound characteristic parameter with the second sound characteristic parameter to calculate a similarity therebetween; and

a recording means for recording a determined result of the similarity based on the calculated similarity.

~~a recording means for recording an input audio signal on a recording medium, a sound characteristic parameter analyzing means for analyzing said input audio signal analyzed and obtaining a sound characteristic parameter dependent on structural factors of the sound source of the audio signal and a retrieving means for comparing sound characteristic parameters for one or more than one audio signals operating as retrieving keys and said sound characteristic parameter for the input audio signal and retrieving a part of the input audio signal to be analyzed resembling the audio signals operating as retrieving keys and obtained from the sound source of the retrieving keys, the result of the retrieving process of said retrieving means being recorded so as to be linked to said retrieving keys and the position used for recording said input audio signal on said recording medium.~~

32. (Original) The sound information storage device according to claim 31, wherein said result of the retrieving process is recorded with said audio signal on said recording medium.

33.-34. (Canceled)

35. (Original) The sound information storage device according to claim 34, further comprising a retrieving key registering means for obtaining sound characteristic

parameters as retrieving keys by extracting a part of said audio signal to be analyzed according to an instruction of the user and holding them in said holding means.

36. (Previously Presented) The sound information storage device according to claim 31, wherein more than one retrieving keys are sequentially used on a one by one basis by a predetermined time unit for the process of computationally determining the similarity.

37. (Withdrawn) A sound/image information retrieving method for retrieving a part of an input signal including a video signal and an audio signal linked to said video signal, said method comprising retrieving a part of an audio signal to be analyzed resembling one or more than one audio signals operating as so many retrieving keys by comparing each of the retrieving key sound characteristic parameters obtained from respective audio signals operating as retrieving keys and dependent on structural factors of the sound source of the audio signals with the sound characteristic parameter obtained by analyzing said audio signal to be analyzed and computationally determining the similarity between them and producing the retrieved part as a result of the retrieving operation conducted on said input signal.

38. (Withdrawn) A sound/image information retrieving method for retrieving a part of an input signal including a video signal and an audio signal linked to said video signal, said method comprising retrieving a part of an audio signal to be analyzed resembling one or more than one audio signals operating as so many retrieving keys by

comparing each of the retrieving key sound characteristic parameters obtained from respective audio signals operating as retrieving keys and dependent on structural factors of the sound source of the audio signals with the sound characteristic parameter obtained by analyzing said audio signal to be analyzed and computationally determining the similarity between them and also retrieving a part of the video signal of said input signal to be analyzed resembling one or more than one images operating as so many retrieving keys by comparing each of the retrieving key image characteristic parameters operating as retrieving keys and showing the characteristics of the image of the video signal and the image characteristic parameter obtained by analyzing the video of said input to be analyzed, a part of said input signal being retrieved on the basis of the result of the retrieving process conducted on said audio signal and that of the retrieving process conducted on said video signal.

39. (Withdrawn) A sound/image information storing method for recording an input signal including a video signal and an audio signal linked to said video signal on a recording medium, retrieving a part of an audio signal to be analyzed resembling one or more than one audio signals operating as so many retrieving keys by comparing each of the retrieving key sound characteristic parameters obtained from respective audio signals operating as retrieving keys and dependent on structural factors of the sound source of the audio signals with the sound characteristic parameter obtained by analyzing said audio signal to be analyzed and computationally determining the similarity between them and recording the result of the retrieving process so as to be

linked to said retrieving keys and the position used for recording said input audio signal on said recording medium.

40. (Withdrawn) A sound/image information storing method for recording an input signal including a video signal and an audio signal linked to said video signal on a recording medium, retrieving a part of an audio signal to be analyzed resembling one or more than one audio signals operating as so many retrieving keys by comparing each of the retrieving key sound characteristic parameters obtained from respective audio signals operating as retrieving keys and dependent on structural factors of the sound source of the audio signals with the sound characteristic parameter obtained by analyzing said audio signal to be analyzed and computationally determining the similarity between them and recording, also retrieving a part of the video signal of said input signal to be analyzed resembling one or more than one images operating as so many retrieving keys by comparing each of the retrieving key image characteristic parameters operating as retrieving keys and showing the characteristics of the image of the video signal and the image characteristic parameter obtained by analyzing the video of said input to be analyzed and recording the result of the retrieving process conducted on said audio signal and said video signal so as to be linked to said retrieving keys and the position used for recording said input audio signal on said recording medium.

41. (Withdrawn) A sound/image information retrieving device comprising a sound characteristic parameter analyzing means for analyzing the audio signal of an input signal including a video signal and an audio signal linked to said video signal and

obtaining a sound characteristic parameter dependent on structural factors of the sound source of the audio signal, a retrieving means for comparing sound characteristic parameters for audio signals operating as retrieving keys and said sound characteristic parameter for the audio signal to be analyzed obtained from said sound characteristic parameter analyzing means and retrieving a part of the audio signal to be analyzed resembling the audio signals operating as retrieving keys and obtained from the sound source of the retrieving keys and a result displaying means for displaying the result of said retrieving process.

42. (Withdrawn) The sound/image information retrieving device according to claim 41, wherein said result displaying means displays the image of part of the video signal corresponding to the part retrieved by said retrieving means.

43. (Withdrawn) A sound/image information retrieving device comprising a sound characteristic parameter analyzing means for analyzing the audio signal of an input signal including a video signal and an audio signal linked to said video signal and obtaining a sound characteristic parameter dependent on structural factors of the sound source of the audio signal, a retrieving means for comparing sound characteristic parameters for audio signals operating as retrieving keys and said sound characteristic parameter for the audio signal to be analyzed obtained from said sound characteristic parameter analyzing means and retrieving a part of the audio signal to be analyzed resembling the audio signals operating as retrieving keys and obtained from the sound

source of the retrieving keys and a reproducing means for extracting and reproducing the part of said input signal corresponding to said resembling part.

44. (Withdrawn) A sound/image information retrieving device comprising a sound characteristic parameter analyzing means for analyzing the audio signal of an input signal including a video signal and an audio signal linked to said video signal and obtaining a sound characteristic parameter dependent on structural factors of the sound source of the audio signal, a sound part retrieving means for comparing sound characteristic parameters for audio signals operating as retrieving keys and said sound characteristic parameter for the audio signal to be analyzed obtained from said sound characteristic parameter analyzing means and retrieving a part of the audio signal to be analyzed resembling the audio signals operating as retrieving keys and obtained from the sound source of the retrieving keys, an image part retrieving means for retrieving a part of the video signal of said input signal to be analyzed resembling one or more than one images operating as so many retrieving keys by comparing each of the retrieving key image characteristic parameters operating as retrieving keys and showing the characteristics of the image of the video signal and the image characteristic parameter obtained by analyzing the video of said input to be analyzed and a result displaying means for displaying the result of the retrieving process of said sound part retrieving means and that of the retrieving process of said image part retrieving means.

45. (Withdrawn) A sound/image information retrieving device comprising a sound characteristic parameter analyzing means for analyzing the audio signal of an input

signal including a video signal and an audio signal linked to said video signal and obtaining a sound characteristic parameter dependent on structural factors of the sound source of the audio signal, a sound part retrieving means for comparing sound characteristic parameters for audio signals operating as retrieving keys and said sound characteristic parameter for the audio signal to be analyzed obtained from said sound characteristic parameter analyzing means and retrieving a part of the audio signal to be analyzed resembling the audio signals operating as retrieving keys and obtained from the sound source of the retrieving keys, an image part retrieving means for retrieving a part of the video signal of said input signal resembling one or more than one images operating as so many retrieving keys by comparing each of the retrieving key image characteristic parameters operating as retrieving keys and showing the characteristics of the image of the video signal and the image characteristic parameter obtained by analyzing the video of said input to be analyzed and a reproducing means for extracting and reproducing the part of said input signal as determined on the basis of the result of the retrieving process of said sound part retrieving means and that of the retrieving process of said image part retrieving means.

46. (Withdrawn) A sound/image information storage device comprising a recording means for recording an input signal including a video signal and an audio signal linked to said video signal on a recording medium, a sound characteristic parameter analyzing means for analyzing the audio signal of an input signal including a video signal and an audio signal linked to said video signal and obtaining a sound characteristic parameter dependent on structural factors of the sound source of the

audio signal and a sound part retrieving means for comparing sound characteristic parameters for one or more than one audio signals operating as retrieving keys and said sound characteristic parameter for the audio signal of said input signal and retrieving a part of the audio signal of said input signal resembling the audio signals operating as retrieving keys, the result of the retrieving process of said sound part retrieving means being recorded so as to be linked to said retrieving keys and the position used for recording said input signal on said recording medium.

47. (Withdrawn) A sound/image information storage device comprising a recording means for recording an input signal including a video signal and an audio signal linked to said video signal on a recording medium, a sound characteristic parameter analyzing means for analyzing the audio signal of an input signal including a video signal and an audio signal linked to said video signal and obtaining a sound characteristic parameter dependent on structural factors of the sound source of the audio signal and a sound part retrieving means for comparing sound characteristic parameters for one or more than one audio signals operating as retrieving keys and said sound characteristic parameter for the audio signal of said input signal and retrieving a part of the audio signal of said input signal resembling the audio signals operating as retrieving keys and an image part retrieving means for retrieving a part of the video signal of said input signal resembling one or more than one images operating as so many retrieving keys by comparing each of the retrieving key image characteristic parameters operating as retrieving keys and showing the characteristics of the image of the video signal and the image characteristic parameter obtained by analyzing the video

of said input to be analyzed and determining the similarity of them, the result of the retrieving process of said sound part retrieving means and that of the retrieving process of said image part retrieving means being recorded so as to be linked to said retrieving keys and the position used for recording said input signal on said recording medium.

48. (New) The sound retrieving method according to claim 5, wherein more than one retrieving keys are sequentially used on one by one basis by a predetermined time unit for the process of computationally determining the similarity.